Comparative Analysis of Agricultural Emissions Across European Countries

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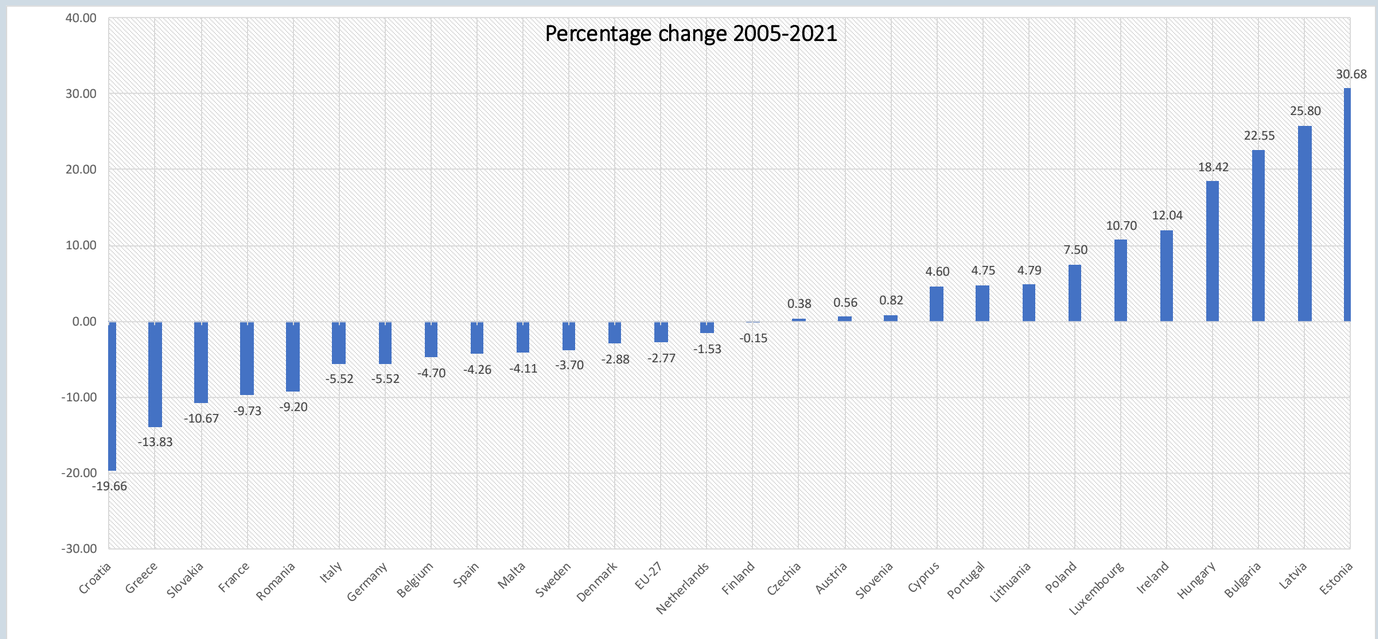
GHG emissions from agriculture in EU

Although agricultural GHG emissions changed very little at the EU level between 2005 and 2021, trends varied widely at the national level, with emissions increasing in 13 and decreasing in 14 Member States. For instance, emissions decreased by more than 10% in Croatia, Greece and Slovakia, and increased by more than 10% in Bulgaria, Estonia, Hungary, Ireland, Latvia and Luxembourg.

Based on projections, most Member States anticipate a continuation of past trends if existing measures remain in place. However, some Member States anticipate a reversal of trends. For instance, although emissions decreased in Greece and Romania between 2005 and 2021, these countries predict that emissions will begin to increase if only existing measures remain in place.



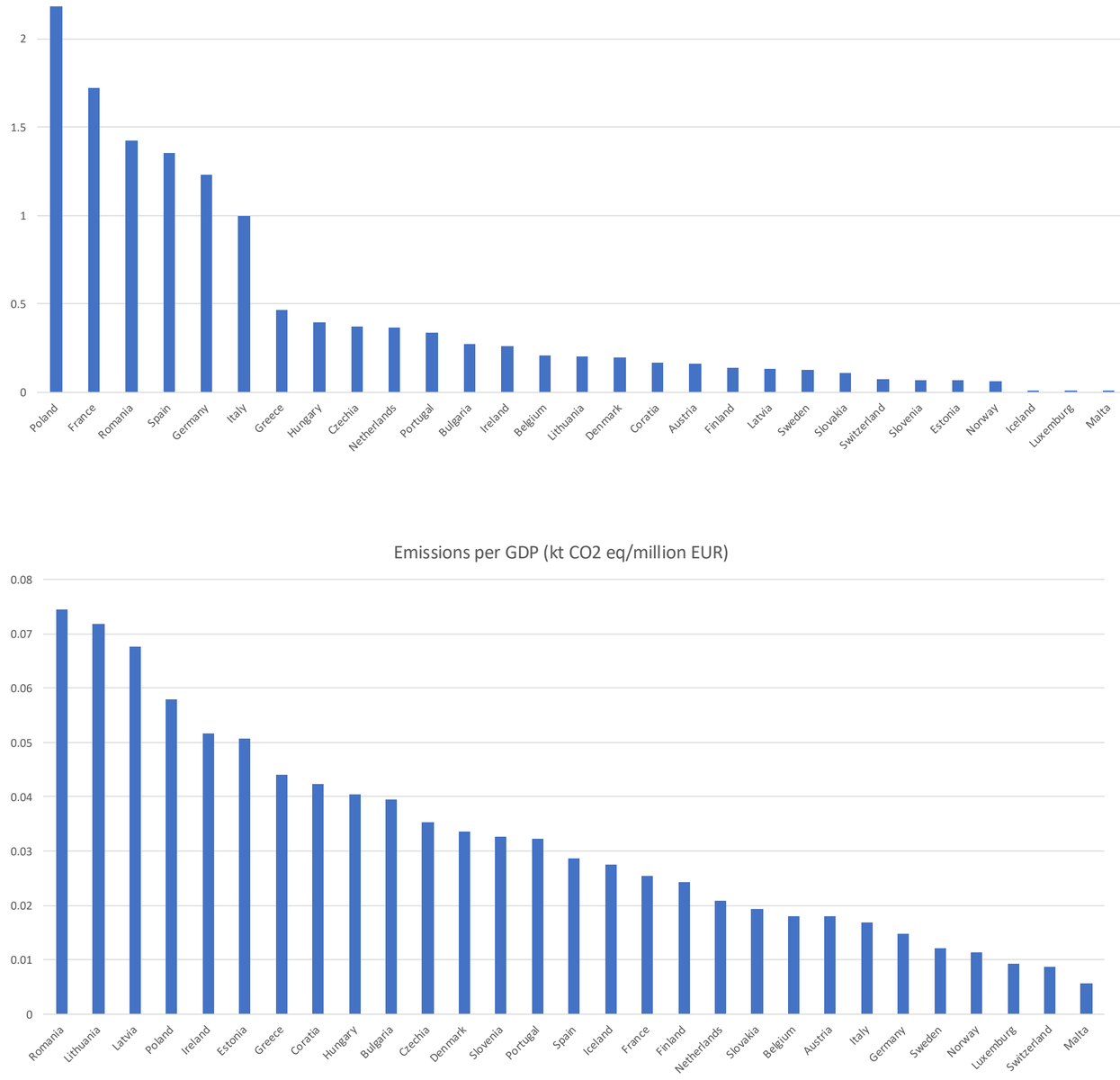
Introduction

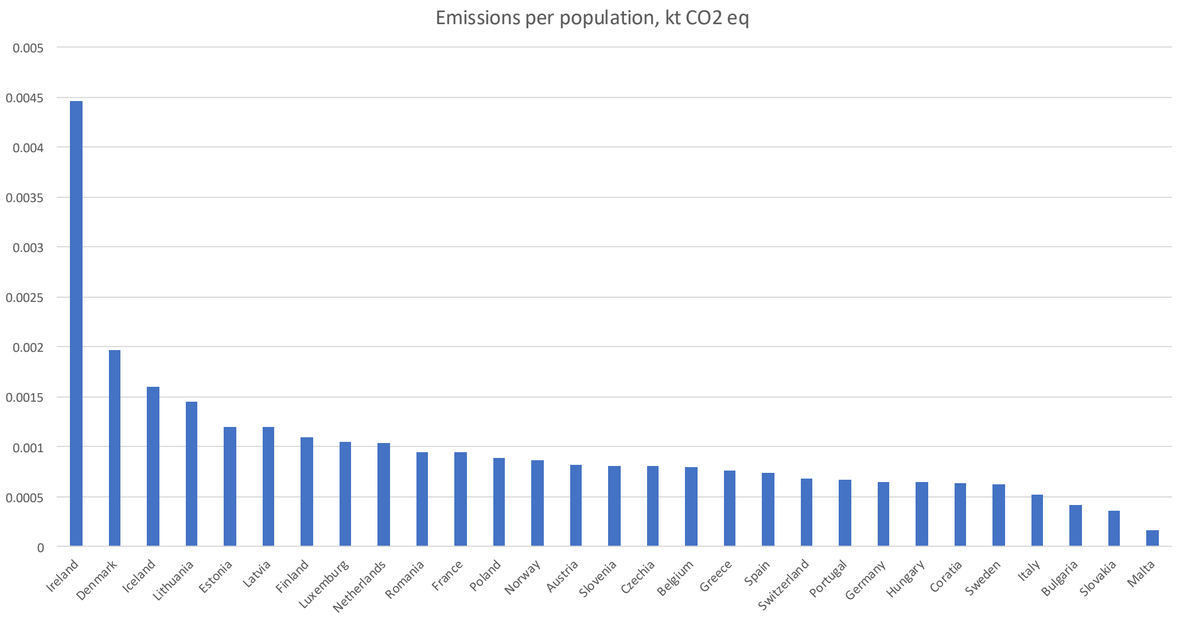
Agriculture is one of the main sources of greenhouse gas (GHG) emissions and has great potential for mitigating climate change. For example, agriculture in Latvia was the second largest sector of GHG emissions after the energy sector with a 22.2% share of total GHG emissions in 2022. The aim of the study is to compare and analyze the amount of GHG emissions generated by agriculture per GDP and population in different countries of the European Union (EU). The ambitious goals set by the EU for 2030 envisage a 30% reduction in the sector, however, in some countries these indicators have not only decreased in recent years, but also increased.

Methodology

The article compares the emission amounts of EU countries from agricultural processes such as CH_4 (enteric fermentation, manure management), N_2O (manure management and agricultural soils) and CO_2 (urea and lime use) in kt CO_2 eq.

Emissions were compared per population, GDP per population and per GDP.





Conclusion

The results show that in countries with a lowest GDP and population, there are quite large emissions from agricultural processes, for example in Latvia, Lithuania. The number of small farms that do not have significant restrictions on fodder requirements and compositions, as well as manure management, could be singled out as reasons. Of course, it is important to increase the amount of organic farms that produce lower emissions. Considering the fact that we are moving towards climate neutrality, countries have introduced significantly stricter requirements to limit emissions, which make up a large part of total GHG emissions.

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